



PATENT

Attorney Docket No: 27013/35308

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Loughney, Kate

Serial No.: 09/256,000

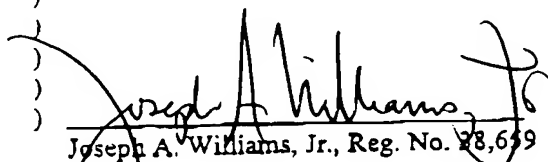
Filed: February 23, 1999

For: Phosphodiesterase 10

Group Art Unit: 1642

Examiner: R. Hutson, Ph.D.

) I hereby certify that this paper is being
) deposited with the United States Postal
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) Assistant Commissioner for Patents,
) Washington, D.C. 20231, on April 26,
) 2000.


Joseph A. Williams, Jr., Reg. No. 28,649

DECLARATION OF KATE LOUGHNEY, Ph.D., UNDER 37 C.F.R. §1.131

I, Kate Loughney, Ph.D., state that,

1. I am the sole inventor of the subject matter claimed in the above application which claims priority of U.S. Provisional Application Serial No: 60/075,508, filed February 23, 1998. I am making this declaration to provide evidence that the subject matter claimed in the above application was completed in the United States at a date at least prior to December 9, 1997, which is the effective filing date of U.S. Patent 5,922,595, cited by the Examiner in an Office Action mailed October 26, 1999.

2. To establish the date of completion of the invention, copies of pages from my laboratory notebook are attached as Exhibit A. Dates on these pages have been removed.

3. The first page in Exhibit A describes the plan for constructing an expression construct using previously isolated clone FB94a. Clone FB 94a is described at page 28, lines 23 through 24, to encode a complete open reading frame for PDE10.

Apr. 26. 2000 9:56AM

MARSHALL, O'TOOLE

No. 8304 P. 3/3

5. The second page in Exhibit A describes steps for growing a host cell line transformed with the completed expression construct comprising the FB 94a sequence under control of the alcohol dehydrogenase promoter as described in the specification in Example 4.

6. Pages 3 through 6 in Exhibit A set forth the final sequence determined for clone FB94a.

7. From these laboratory notebook pages, it can be seen that the subject matter of the claims in the application was completed at least before December 9, 1997.

8. This declaration is submitted in response to a non-final Office Action.

9. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Kate Loughney 4/26/00
Kate Loughney, Ph.D. Date

From Page No. _____

to build expression construct pde 10.

use CDNA FB 94a.

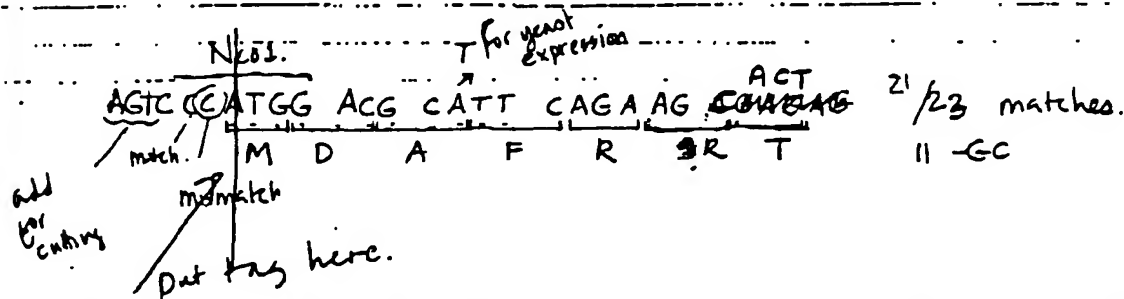
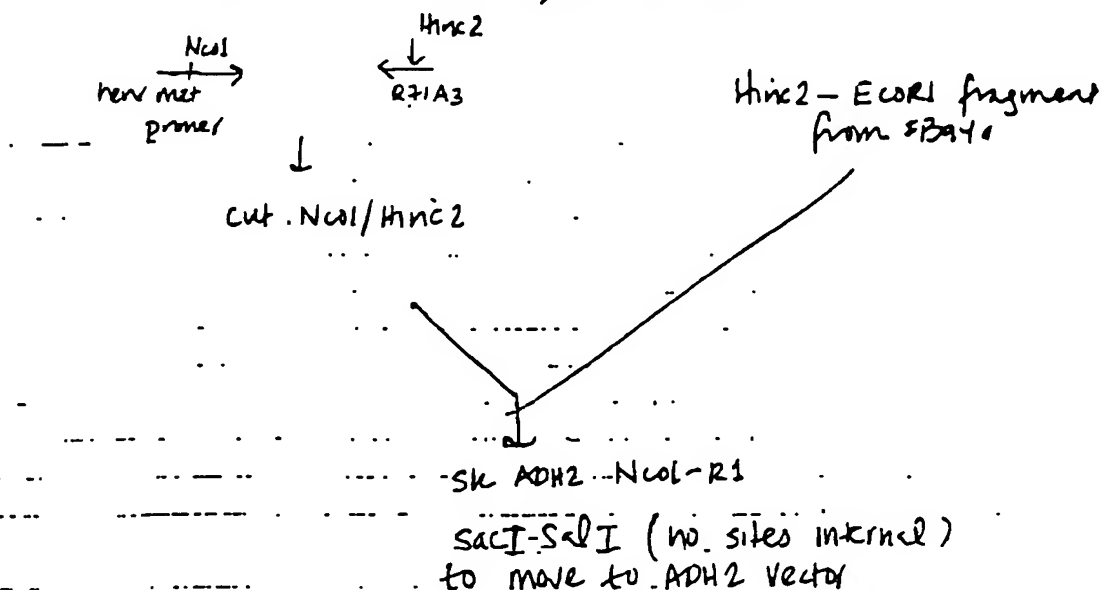
lacks yellow + green regions

loss of yellow changes frames, uses 5' met in another frame.

M D A F R ~~R~~ + P Y K \longrightarrow as FB 72.2

Sequence cDNA to confirm.

use PCR to make exact 5' end.



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Witnessed & Understood by me.

Day & Linn

Date

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Recorded by

Kate Loughney

Date

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From Page No. 22

Growing pde 10

shrink sc-leu

O/N 5 ml sc-leu

0.2 ml → 2x 120 ml sc-leu 3rd 30°C
O/N " "

→ spin

wash yep 3% glycerol

→ 100 ml w/107 cells yep 3% glycerol 10⁰⁰ AM x 2

— x 1.

12¹⁵ - spin out 15 l.

25.5hr +

25.5hr - 1

freeze in dry ice
22hr.

515 - 310

→ Lother

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Witnessed & Understood by me.

Mark Knight

Date

[Redacted]

Invented by

Recorded by

Kak Loughney

Date

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TITLE: EB94 - PDF10 final sequence



Contlg[0002]

mc45117 r71a3, 1 to 323

2048118 248241 44 12 818

ma16110 3123 123 to 323

mc46118 17122, 123 to 125

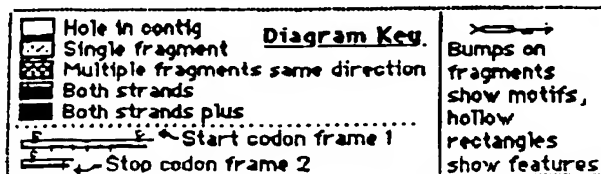
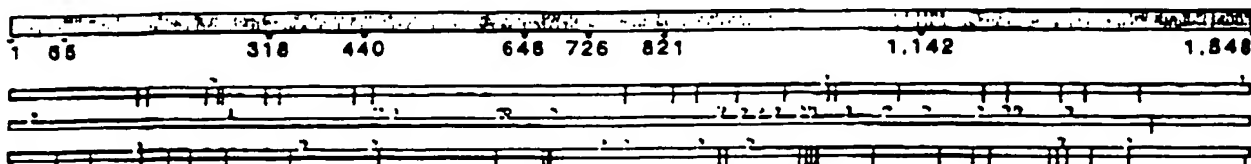
15-121-3124 440 to 1130

104-15130-31a1

MC43120 17101, 700 to 1033
MC44327 1110, 250 to 1510

ma16122 - 3122 1122 to 1512

1943-1944, 1945-1946, 1947-1948, 1949-1950, 1951-1952, 1953-1954, 1955-1956, 1957-1958, 1959-1960, 1961-1962, 1963-1964, 1965-1966, 1967-1968, 1969-1970, 1971-1972, 1973-1974, 1975-1976, 1977-1978, 1979-1980, 1981-1982, 1983-1984, 1985-1986, 1987-1988, 1989-1990, 1991-1992, 1993-1994, 1995-1996, 1997-1998, 1999-2000, 2001-2002, 2003-2004, 2005-2006, 2007-2008, 2009-2010, 2011-2012, 2013-2014, 2015-2016, 2017-2018, 2019-2020, 2021-2022, 2023-2024, 2025-2026, 2027-2028, 2029-2030, 2031-2032, 2033-2034, 2035-2036, 2037-2038, 2039-2040, 2041-2042, 2043-2044, 2045-2046, 2047-2048, 2049-2050, 2051-2052, 2053-2054, 2055-2056, 2057-2058, 2059-2060, 2061-2062, 2063-2064, 2065-2066, 2067-2068, 2069-2070, 2071-2072, 2073-2074, 2075-2076, 2077-2078, 2079-2080, 2081-2082, 2083-2084, 2085-2086, 2087-2088, 2089-2090, 2091-2092, 2093-2094, 2095-2096, 2097-2098, 2099-2100, 2101-2102, 2103-2104, 2105-2106, 2107-2108, 2109-2110, 2111-2112, 2113-2114, 2115-2116, 2117-2118, 2119-2120, 2121-2122, 2123-2124, 2125-2126, 2127-2128, 2129-2130, 2131-2132, 2133-2134, 2135-2136, 2137-2138, 2139-2140, 2141-2142, 2143-2144, 2145-2146, 2147-2148, 2149-2150, 2151-2152, 2153-2154, 2155-2156, 2157-2158, 2159-2160, 2161-2162, 2163-2164, 2165-2166, 2167-2168, 2169-2170, 2171-2172, 2173-2174, 2175-2176, 2177-2178, 2179-2180, 2181-2182, 2183-2184, 2185-2186, 2187-2188, 2189-2190, 2191-2192, 2193-2194, 2195-2196, 2197-2198, 2199-2200, 2201-2202, 2203-2204, 2205-2206, 2207-2208, 2209-2210, 2211-2212, 2213-2214, 2215-2216, 2217-2218, 2219-2220, 2221-2222, 2223-2224, 2225-2226, 2227-2228, 2229-2230, 2231-2232, 2233-2234, 2235-2236, 2237-2238, 2239-2240, 2241-2242, 2243-2244, 2245-2246, 2247-2248, 2249-2250, 2251-2252, 2253-2254, 2255-2256, 2257-2258, 2259-2260, 2261-2262, 2263-2264, 2265-2266, 2267-2268, 2269-2270, 2271-2272, 2273-2274, 2275-2276, 2277-2278, 2279-2280, 2281-2282, 2283-2284, 2285-2286, 2287-2288, 2289-2290, 2291-2292, 2293-2294, 2295-2296, 2297-2298, 2299-2300, 2301-2302, 2303-2304, 2305-2306, 2307-2308, 2309-2310, 2311-2312, 2313-2314, 2315-2316, 2317-2318, 2319-2320, 2321-2322, 2323-2324, 2325-2326, 2327-2328, 2329-2330, 2331-2332, 2333-2334, 2335-2336, 2337-2338, 2339-2340, 2341-2342, 2343-2344, 2345-2346, 2347-2348, 2349-2350, 2351-2352, 2353-2354, 2355-2356, 2357-2358, 2359-2360, 2361-2362, 2363-2364, 2365-2366, 2367-2368, 2369-2370, 2371-2372, 2373-2374, 2375-2376, 2377-2378, 2379-2380, 2381-2382, 2383-2384, 2385-2386, 2387-2388, 2389-2390, 2391-2392, 2393-2394, 2395-2396, 2397-2398, 2399-2400, 2401-2402, 2403-2404, 2405-2406, 2407-2408, 2409-2410, 2411-2412, 2413-2414, 2415-2416, 2417-2418, 2419-2420, 2421-2422, 2423-2424, 2425-2426, 2427-2428, 2429-2430, 2431-2432, 2433-2434, 2435-2436, 2437-2438, 2439-2440, 2441-2442, 2443-2444, 2445-2446, 2447-2448, 2449-2450, 2451-2452, 2453-2454, 2455-2456, 2457-2458, 2459-2460, 2461-2462, 2463-2464, 2465-2466, 2467-2468, 2469-2470, 2471-2472, 2473-2474, 2475-2476, 2477-2478, 2479-2480, 2481-2482, 2483-2484, 2485-2486, 2487-2488, 2489-2490, 2491-2492, 2493-2494, 2495-2496, 2497-2498, 2499-2500, 2501-2502, 2503-2504, 2505-2506, 2507-2508, 2509-2510, 2511-2512, 2513-2514, 2515-2516, 2517-2518, 2519-2520, 2521-2522, 2523-2524, 2525-2526, 2527-2528, 2529-2530, 2531-2532, 2533-2534, 2535-2536, 2537-2538, 2539-2540, 2541-2542, 2543-2544, 2545-2546, 2547-2548, 2549-2550, 2551-2552, 2553-2554, 2555-2556, 2557-2558, 2559-2560, 2561-2562, 2563-2564, 2565-2566, 2567-2568, 2569-2570, 2571-2572, 2573-2574, 2575-2576, 2577-2578, 2579-2580, 2581-2582, 2583-2584, 2585-2586, 2587-2588, 2589-2590, 2591-2592, 2593-2594, 2595-2596, 2597-2598, 2599-2600, 2601-2602, 2603-2604, 2605-2606, 2607-2608, 2609-2610, 2611-2612, 2613-2614, 2615-2616, 2617-2618, 2619-2620, 2621-2622, 2623-2624, 2625-2626, 2627-2628, 2629-2630, 2631-2632, 2633-2634, 2635-2636, 2637-2638, 2639-2640, 2641-2642, 2643-2644, 2645-2646, 2647-2648, 2649-2650, 2651-2652, 2653-2654, 2655-2656, 2657-2658, 2659-2660, 2661-2662, 2663-2664, 2665-2666, 2667-2668, 2669-2670, 2671-2672, 2673-2674, 2675-2676, 2677-2678, 2679-2680, 2681-2682, 2683-2684, 2685-2686, 26



EB94a seq is finished.

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Services by Mr. [Signature]

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Recorded by

forced by
Kate Loughrey

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TITLE FB94a - DDE10 - final sequence Project No. _____
Book No. _____

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fb94a final

insertion in FB94a.2 one of these 2 places.

CCCAAGGCCATCTACCTGGACATCGATGGACGCATTGAGAACTCCGTACAAAGTGAG 60
P K A I Y L D I D G R I Q X V Q S E
P R P S T W T S D A F R S T P Y K V R
Q G H L P G N R W T H S E A L R T K * D
ACCTGTGGCCATCAAGCAACTCTCCGAGAGAGAGAAATTAATCCAGAGCGTCTGCGCGCA 120
T C G H Q A T L E R R R I N P E R A G A
P V A I K Q L S E E E E E L I G S V L A Q
L W P S S N S P R E E K N * S R A C W R R
GGTTGCAGAGCAOTTCTCAAGAGCATTCAAAATCAATGAAGTGAAGTTGCAAA 180
G C R A V L K S I Q N Q * T E S * S C K
V A E Q F S R A F K I N E L K A E V A N
L Q S S S Q E H S K S M N * K L K L Q I
TCACTTGGCTGTCTAGAGAAAGCGCTGGAATTTGGAAGGACTAAAAGTGGTGGAGATTGA 240
S L G C P R E T R G I G R T K S G G D *
H L A V L E K R V E L E G L K V V E I E
T W L S * R N A W N W K D * K W W R L R
GAAATGCAAGAGTACATTAAGAAGATGAGGGAGGAGCTGGCGGCCAGAAGCAGCAGGAC 300
S N Q E * E * E D E G G A G G Q K Q Q D
K C K S D I K K M R E E L A A R S S R T
N A E V T L R R * G R S W R P E A A G P
CAACTGCCCCCTGTAAAGTACAGTTTGTGGATAACCACAAGAAGTTGACTCCTCGACGCGA 360
Q L P L * V O F F G * P Q E V D S S T R
N C P C K Y S F L D N H K K L T P R R D
P P V S T V F W I T T R S * L L D A M
TGTTCACCTTACCCCAAGTACCTGCTCTCTCCAGAGACCATCGAGGCCCTGCGGAAGCC 420
P L P Q V P A L S R D H R G P A E A
T Y P K Y L L S P E T I E A L R K P
P L T P S T C S L Q R P S R P C G S R
GACCTTTGACGTCTGGCTTTGGGAGCCCCAATGAGATGCTGAGCTGCCTGGAGCACATGTA 480
P L * R L A L G A Q * D A E L P G A H V
P D V W L W E P N E M L S C L E H M Y
P L T S G F G S P M R C * A A W S T C T
CCACGACCTCGGGCTGGTCAGGGACTTCAGCATCAACCCTGTCCACCTCAGGAGGTGGCT 540
P R P R A G Q G L Q H Q P C H P Q E V A
H D L G L V R D F S I N P V T L R R W L
T T S G W S G T S A S T L S P S G G G C
GTTCTGCGTCCACGACAACCTACAGAAACAACCCCTTCCACAACCTTCCGGCACTGCTTCTG 600
V L R P R Q L Q K Q P L P Q L P A L L L
P C V H D N Y R N N P F H N F R H C F C
S A S T T T T E T T P S T T S G T A S A

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Witnessed & Understood by me.

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Date

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Invented by

Accepted by

Kate Loughney

Date

[Redacted]

Project No. _____ Title FB44a-PDE10- final sequence
Book No. _____

com. 216

CGTGGCCCCAGATGATGTACAGCATGGTCTGGCTCTGCAGTCTCCAGGAGAAGTTCTCACA 660
R G P D D V Q H G L A L Q S P G E V L T
V A Q M M Y S M V W L C S L Q E K F S Q
W P R * C T A W S G S A V S R R S S H K

AACGGATATCCTGATCCTAATGACAGCGGCCATCTGCCACGATCTGGACCATCCCGGCTA 720
N G Y P D P N D S G H L P R S G P S R L
T D I L I L M T A A I C H D L D H P G Y
R I S * S * * Q R P S A T I W T I P A T

CAACAACACGTACCAGATCAATGCCCCGACAGAGCTGGCGGTCCGCTACAATGACATCTC 780
Q Q H V P D Q C P H R A G G P L Q * H L
N N T Y Q I N A R T E L A V R Y N D I S
T T R T R S M P A Q S W R S A T M T S H

ACCGCTGGAGAACCACCACTGCGCCGTGGCCTTCCAGATCCTCGCCGAGCCTGAGTGCAA 840
T A G E P P L R R G L P D P R R A * V Q
P L E N H H C A V A F Q I L A E P E C N
R W R T T T A P W P S R S S P S L S A T

CATCTTCTCCAACATCCCACCTGATGGGTTCAAGCAGATCCGACAGGGAATGATCACATT 900
H L L Q H P T * W V Q A D P T G N D H I
I F S N I P P D G F K Q I R Q G M I T L
S S P T S H L M Q S S R S D R E * S H *

AATCTTGGCCACTGACATGGCAAGACATGCAGAAATTATGGATTCTTTCAAAGAGAAAAT 960
N L G H * H G K T C R N Y G F F Q R E N
I L A T D M A R H A E I M D S F K E K M
S W P L T W Q D M Q K L W I L S K R K W

GGAGAATTTTGACTACAGCAACGAGGAGCACATGACCCTGCTGAAGATGATTTTGATAAA 1020
Q E F * L Q Q R G A H D P A E D D F D K
E N F D Y S N E E H M T L L K M I L I K
R I L T T A T R S T * P C * R * F * * N

ATGCTGTGATATCTCTAACGAGGTCCGTCCAATGGAAGTCGAGAGCCTTGGGTGGACTG 1080
M L * Y L * R G P S N G S R R A L G G L
C C D I S N E V R P M E V A E P W V D C
A V I S L T R S V Q W K S Q S L G W T V

TTTATTAGAGGAATATTTTATGCAGAGCGACCGTGAGAAGTCAGAAGGCCTTCTGTGGC 1140
F I R G I F Y A E R P * E V R R P S C G
L L E E Y F M Q S D R E K S E G L P V A
Y * R N I L C R A T V R S Q K A F L W H

ACCGTTTCATGGACCGAGACAAAGTGACCAAGGCCACAGCCCAGATTGGGTTTCATCAAGTT 1200
T V H G P R Q S D Q G H S P D W V H Q V
P F M D R D K V T K A T A Q I G F I K F
R S W T E T K * P R P Q P R L G S S S L

TGTCCTGATCCCAATGTTTGAAACAGTGACCAAGCTCTTCCCATGGTTGAGGAGATCAT 1260
C P D P N V * N S D Q A L P H G * G D H
V L I P M F E T V T K L F P M V E I M
S * S Q C L K Q * P S S S P W L R R S C

Page No. _____

Witnessed & Understood by *[Signature]*

Date *[Redacted]*

Invented by

Date *[Redacted]*

Recorded by

Kate Loughney

FB94a - PDE10 - final sequence

Page No. _____

GCTGCAGCCACTTTGGGAATCCCGAGATCGCTACGAGGAGCTGAAAGCGGATAGATGACGC 1320
 A A A T L G I P R S L R G A E A D R * R
 L Q P L W E S R D R Y E E L K R I D D A
 C S H F G N P E I A T R S * S G * M T P

CATGAAAGAGTTACAGAAGAAGACTGACAGCTTGACGTCTGGGGCCACCGAGAAGTCCAG 1380
 H E R V T E E D * Q L D V W G H R E V Q
 M K E L Q K K T D S L T S G A T E K S R

* K S Y R R R L T A * R L G P P R S P E
 AGGGAGAAGCAGAGATGTGAAAAACAGTAAAGGAGACTGTGCTGAGGAAAGCGGGGGC 1440
 R E K Q R C E K Q * R R L C L R K A G G
 G R S R D V K N S E G D C A * G K R G A
 G E A E M * K T V K E T V P E E S G G R

GTGGCTGCAGTTCTGGACGGGCTGGCCGAGCTGCGCGGATCCTTGTGCAGGGAAGAGCT 1500
 V A A V L D G L A E L R G I L V Q G R A
 W L Q F W T G W P S C A G S L C R E E L
 G C S S G R A G R A R D P C A G K S C

GCCCTGGGCACCTGGCACCACAAGACCATGTTTTCTAAGAACCATTTT 1548
 A L G T W H H K T M F S K N H F
 P W A P Q T T R P C F L R T I
 P Q H L A P Q D H V F * E P F

in
 FB76.2
 checked
 in
 FB94
 and
 in
 FB76.2
 poly-
 morphism

met at 26 - stop at H24.
 466 a.a.
 543w7 Da

with flastag
 475 aa M-DYKDDK-
 55N93 PDE10.

When compared to other PDEs 29/50 match PDE4's.

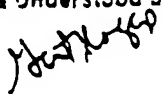
HOLD H P → CNIF

24 match to rod a in same region w/gaps



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Date



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Date

